Hogben claims to find contemporary support for the mechanical biology in two other comparatively recent lines of research. One is the geneticists' work on the mapping of the chromosomes and the genes, which we have already touched upon. We have seen that brilliant as are the achievements made, they do not, as is claimed in some quarters, provide any explanation of heredity and development. They merely demonstrate, in some detail in special cases, what material constituents of the egg-cell are essential to, or correlated with, the development of certain adult features. That the substance of the egg-cell must contain its special material constituents was a truth which could be confidently inferred independently of this demonstration; which, therefore, does not in principle bring any new support to the mechanical biology.

The third line of recent experimental work invoked by Hogben is that upon the processes involved in the contraction of muscles. It has long been a seeming anomaly that the contraction of muscles, by means of which all our mechanical operations are effected, and which has all the outward appearance of a mechanical process, a mere movement of masses in space repeated again and again in unvarying fashion—that this so-seemingly mechanical a process, in face of all the claims of the mechanists to be able to give mechanical explanations of bodily processes, has remained recalcitrant to all such attempts. It was so forty years ago when I devoted nearly two years of strenuous labour to the elaboration of what was at that

time the first and only mechanical theory of the contractile process. And it is so to-day, in spite of important advances made in our knowledge of the chemical processes involved in muscular activity.

With a superfluity of spleen against all teleological